

Application No. 09/684,064
Amendment dated May 9, 2005
Reply to Office Action of March 31, 2005

REMARKS

Applicant respectfully requests further examination and reconsideration in view of the above amendments and the arguments set forth below. In the Office Action mailed March 31, 2005, claims 1-31 have been rejected. In response, the Applicant has amended claims 1, 10 and 25, canceled claims 5 and 30 and submitted the following remarks. Accordingly, claims 1-4, 6 - 29 and 31 are pending. Favorable reconsideration is respectfully requested in view of the amended Abstract, the amended claims and the remarks below.

Rejections Under 35 U.S.C. §103

Within the Office Action, claims 1-6, 8-12, 14-17, 19-21 and 23-31 have been rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,011,991 to Mardirossian (hereinafter Mardirossian) in view of U.S. Patent No. 6,230,048 to Selvester et al (hereinafter Selvester). The Applicant respectfully disagrees with this rejection.

Mardirossian teaches a system and method for enabling human beings to communicate by way of their monitored brain activity. The brain activity of an individual is monitored and transmitted to a remote location. At the remote location, the monitored brain activity is compared with pre-recorded normalized brain activity curves, wave forms, or patterns to determine if a match or a substantial match is found. As is recognized in the Office Action, Mardirossian fails to explicitly recite the step of displaying the interpretation in the correlated physiological records on a display. Furthermore, Mardirossian does not teach interpreting the sensed physiological signal according to predefined criteria to generate an interpretation, and following, Mardirossian cannot teach correlating the interpretation with the physiological data records.

Selvester teaches a computer-based electrocardio interpretation system and method wherein subject specific ECG data is interpreted in accordance with a set of interpretation rules to identify the presence, and certain characteristics, of various selected heart conditions. Selvester does not teach displaying the correlated physiological data record. While Selvester discloses a heart representational visual display, there is no

teaching or suggestion in Selvester nor Mardirossian to combine the teachings of Selvester and Mardirossian whatsoever. In fact, even if these two references were combined, the combination would not include elements as claimed and taught in the present invention.

In contrast to the teachings of Mardirossian, Selvester and their combination, the method and system of the present invention includes interpreting physiological data with a library of physiological data records, and a physiological data acquisition device coupled to the library and capable of acquiring physiological data from a patient or subject. The acquisition device includes an interpretation module to generate an interpretation of the physiological data and a correlation module to compare the interpretation to the records in the library of physiological records and determine a set of correlated data records. The method and system of the present invention interprets and correlates by measuring the raw data, analyzing numerous characteristics such as wave form height, distance between peaks, and extracting various features of the wave form. The present invention does not merely create a wave form, but rather extracts features of the waveform to be compared with features of previously interpreted physiological data and used to check the interpretation made by the interpretation module. The interpretation module then uses the measured features to generate an interpretation of the physiological data [present invention, page 5, lines 19-28].

The system in Mardirossian simply senses electrical signals produced by the brain and generates a wave form. This wave form is simply a visual representation of raw data signals provided by the sensors over a period of time. These wave forms are not measured and interpreted, and no features of this wave form are extracted to be analyzed by the interpretation module.

The amended independent claim 1 is a method of providing real time decision support in the review of physiological data comprising establishing a library of interpreted physiological data records, gathering of physiological data, interpreting the physiological data based on a predetermined set of criteria to generate an interpretation, interpretation wherein the interpreting step includes measuring the physiological data,

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analyzing a set of characteristics associated with the physiological data, extracting one or more patterns from the physiological data and comparing the extracted patterns from the physiological data to a set of known patterns, correlating the interpretation to one or more of the physiological data records in the library of physiological data records and displaying the interpretation in the correlated physiological data records on a display. As discussed above, neither Mardirossian, Selvester nor their combination teach interpreting the physiological data based on a predetermined set of criteria to generate an interpretation nor correlating the interpretation to one or more of the physiological data records in the library of physiological data records. For at least these reasons, claim 1 is allowable over the teachings of Mardirossian, Selvester and their combination.

Claims 2-4, 6, 8 and 9 are all dependent upon the independent claim 1. As discussed above, the independent claim 1 is allowable over the teachings of Mardirossian, Selvester and their combination. Accordingly, the dependent claims 2-6, 8 and 9 are all also allowable as being dependent upon an allowable base claim. Claim 5 has been canceled.

The amended independent claim 10 is directed to a physiological data interpretation system comprising a library of physiological data records, physiological data acquisition device capable of acquiring physiological data and coupled to the library of physiological data records, the acquisition device having an interpretation module to generate an interpretation of the physiological data and a correlation module to compare the interpretation to the records in the library of physiological records and determine a set of correlated data records wherein the interpreting step includes measuring the physiological data, analyzing a set of characteristics associated with the physiological data, extracting one or more patterns from the physiological data and comparing the extracted patterns from the physiological data to a set of known patterns and an output device coupled to the acquisition device that displays the interpretation and the correlated physiological data records. As discussed above, neither Mardirossian, Selvester nor their combination teach a physiological data acquisition device capable of acquiring physiological data and coupled to the library of physiological data records, nor an

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interpretation module to generate interpretation of the physiological data, nor a correlation module to compare the interpretation to the records in the library of physiological records, nor an output device to display the interpretation and the correlated physiological data records. For at least these reasons, the independent claim 10 is allowable over the teachings of Mardirossian, Selvester and their combination.

Claims 11, 12, 14-17, 19-21, 23 and 24 are dependent upon the independent claim 10. As discussed above, the independent claim 10 is allowable over the teachings of Mardirossian, Selvester and their combination. Accordingly, the dependent claims 11, 12, 14-17, 19-21, 23 and 24 are all also allowable as being dependent upon an allowable base claim.

The amended independent claim 25 is directed to a method of interpreting physiological data. The Applicant respectfully submits that the independent claim 25 is allowable for substantially the same reasons as the independent claim 1 is allowable as discussed above. Claims 26-29 and 31 are all dependent upon the independent claim 25. As discussed above, the independent claim 25 is allowable over the teachings of Mardirossian, Selvester and their combination. Accordingly, the dependent claims 26-29 and 31 are all allowable as being dependent upon an allowable base claim. Claim 30 has been canceled.

Within the Office Action, claim 7 has been rejected under 35 U.S.C. §103 as being unpatentable over Mardirossian in view of Selvester as applied to claim 1 above, and further in view of U.S. Patent No. 6,139,494 to Cairnes (hereinafter Cairnes). Claim 7 is dependent upon the independent claim 1. As discussed above, the independent claim 1 is allowable over the teachings of Mardirossian, Selvester and their combination. Accordingly, the independent claim 7 is allowable as being dependent upon an allowable base claim.

Within the Office Action, claim 18 has been rejected under 35 U.S.C. §103(a) as being unpatentable over Mardirossian in view of Selvester as applied to claim 10 above, and further in view of U.S. Patent No. 6,203,495 to Bardy (hereinafter Bardy). Claim 18 is dependent upon the independent claim 10. As discussed above, the independent claim

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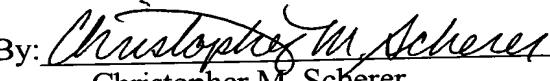
10 is allowable over the teachings of Mardirossian, Selvester and their combination. Accordingly, claim 18 is allowable as being dependent upon an allowable base claim.

Within the Office Action, claims 13 and 22 have been rejected under 35 U.S.C. §103(a) as being unpatentable over Mardirossian in view of Selvester as applied to claims 10 and 12 above, and further in view of U.S. Patent No. 6,264,614 to Albert et al (hereinafter Albert). Claims 13 and 22 are dependent upon the independent claim 10. As discussed above, the independent claim 10 is allowable over the teachings of Mardirossian, Selvester and their combination. Accordingly, claims 13 and 22 are also allowable as being dependent upon an allowable base claim.

For the reasons given above, Applicant respectfully submits that the claims are now in condition for allowance, and allowance at an early date would be appreciated. Should the Examiner have any questions or comments, they are encouraged to call the undersigned at 414-271-7590 to discuss the same so that any outstanding issues can be expeditiously resolved.

Respectfully submitted,

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